



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

If  $p=3$ ,  $q=2$ , then  $n=\frac{m}{m^2-30}$ ,  $=1$  when  $m=6$ ;  $\therefore x=13$ ,  $y=11$ , and the numbers are 168 and 120.

If  $p=4$ ,  $q=1$ , then  $n=\frac{m}{m^2-60}$ ,  $=2$  when  $m=8$ ; and then  $x=34$ ,  $y=31$ , and the numbers are 1155 and 960.

---

## PROBLEMS.

---

16. Proposed by H. W. DRAUGHON, Clinton, Louisiana.

Find three numbers such that the cube of any one plus the sum of the squares of the other two will be a square.

17. Proposed by ARTEMAS MARTIN, LL. D., U. S. Coast and Geodetic Survey Office, Washington, D. C.

Is it possible to find two positive whole numbers such that each of them, and also their sum and their difference, when *diminished* by unity shall all be squares?

Solutions to these problems should be received on or before December 1st.

---

## AVERAGE AND PROBABILITY.

---

Conducted by B. F. FINKEL, Kidder, Mo. All contributions to this department should be sent to him.

---

## SOLUTIONS TO PROBLEMS.

---

8. Proposed by G. B. M. ZERR, A. M., Principal of High School, Staunton, Virginia.

Prove that the mean area of all triangles having their vertices upon the surface of a given triangle and bases parallel to the base of the given triangle, is  $\frac{1}{2}\frac{1}{3}$  (area of given triangle).

- I. Solution by F. P. MATZ, M. Sc., Ph. D., Professor of Mathematics and Astronomy in New Windsor College, New Windsor, Maryland.

Represent  $AD$  by  $a$ ,  $BC$  by  $b$ , and the area of  $\triangle ABC$ ,  $=\frac{1}{2}ab$ , by  $\Delta$ .